IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

	§	
COMMONWEALTH SCIENTIFIC AND	§	
INDUSTRIAL RESEARCH	§	
ORGANISATION,	§	
	§	
Plaintiff,	§	Case No. 6:12-cv-578
	§	
v.	§	LEAD CASE
	§	
MEDIATEK INC., ET AL.,	§	
	§	
Defendants.	§	
	§	

MEMORANDUM OPINION AND ORDER

This Memorandum Opinion construes the disputed claim terms in U.S. Patent No. 5,487,069 ("the '069 Patent"). Also before the Court is Defendants MediaTek Inc.; MediaTek USA Inc.; Ralink Technology Corporation (USA); Ralink Technology Corporation (Taiwan); Texas Instruments Inc.; Amazon.com, Inc.; Barnes & Noble, Inc.; Nokia Corporation; Nokia, Inc.; Samsung Electronics Co. Ltd.; Samsung Electronics America, Inc.; and Samsung TeleCommunications America, LLC's (collectively, "Defendants")[1] Motion for Summary Judgment of Invalidity Based on Indefiniteness (Docket No. 263, "Motion for Summary Judgment"). On April 3, 2014, the Parties presented arguments on the disputed claim terms at a *Markman* hearing. For the reasons stated herein, the Court adopts the constructions set forth below and **RECOMMENDS DENYING** the Motion for Summary Judgment.

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[1] Defendants Realtek Semiconductor Corporation ("Realtek") and Real Communications, Inc. ("Real Communications") are also included in the term "Defendants" for claim construction purposes unless otherwise excluded. Realtek and Real Communications were not parties to the Motion for Summary Judgment. Accordingly, for purposes of the Motion for Summary Judgment, "Defendants" does not include these two parties.

BACKGROUND

Plaintiff Commonwealth Scientific and Industrial Research Organisation ("CSIRO") alleges that Defendants infringe the '069 Patent. The '069 Patent, which discloses a "Wireless LAN," has been litigated for almost ten years and has been the subject of three reexaminations. Prior litigation has resulted in several claim construction orders concerning the '069 Patent.[2] As the Parties in this litigation have agreed and the Court has ordered, the Court's constructions set forth in Memorandum Opinion and Order, *CSIRO v. Lenovo (United States) Inc.,* No. 6:09-cv-399, Docket No. 276 (E.D. Tex. Oct. 12, 2011) will govern as to most of the disputed terms in this litigation. Docket No. 245. However, two additional disputed terms, not previously construed, were presented for construction in this case.

APPLICABLE LAW

Claim Construction

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent's intrinsic evidence to define the patented invention's scope. *Id.* at 1313–1314; *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification and the prosecution history. *Phillips*, 415 F.3d at 1312–13;

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[2] *See* Memorandum Opinion, *CSIRO v. Buffalo Tech. (USA) Inc.*, No. 2:05-cv-53, Docket No. 104 (E.D. Tex. May 8, 2006); Memorandum Opinion and Order, *Intel Corp. v. CSIRO*, No. 6:06-cv-551, Docket No. 254 (E.D. Tex. Aug. 14, 2008); Memorandum Opinion and Order Regarding Supplemental Claim Construction, *Intel Corp. v. CSIRO*, No. 6:06-cv-551, Docket No. 506 (E.D. Tex. Apr. 3, 2009); Memorandum Opinion and Order, *Intel Corp. v. CSIRO*, No. 6:06-cv-551, Docket No. 517 (E.D. Tex. Apr. 9, 2009); Memorandum Opinion and Order, *Marvell Semiconductor v. CSIRO*, No. 6:07-cv-00204, Docket No. 361 (E.D. Tex. Apr. 27, 2010); Memorandum Opinion and Order, *CSIRO v. Lenovo (United States) Inc.*, No. 6:09-cv-399, Docket No. 276 (E.D. Tex. Oct. 12, 2011); Memorandum Opinion and Order, *CSIRO v. Lenovo (United States) Inc.*, No. 6:09-cv-399, Docket No. 366 (E.D. Tex. Jan. 20, 2012).

Bell Atl. Network Servs., 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

Claim language guides the Court's construction of claim terms. *Phillips*, 415 F.3d at 1314. "[T]he context in which a term is used in the asserted claim can be highly instructive." *Id.* Other claims, asserted and unasserted, can provide additional instruction because "terms are normally used consistently throughout the patent." *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning that it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. For example, "[a] claim interpretation that excludes a preferred embodiment from the scope of the claim 'is rarely, if ever, correct.'" *Globetrotter Software, Inc. v. Elam Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics Corp.*, 90 F.3d at 1583). But, "[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims." *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); *see also Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of the patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent"). The well-established doctrine of prosecution disclaimer "preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution." *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). The prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. *Middleton, Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002); *see also Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 994 (Fed. Cir. 2003) ("The disclaimer . . . must be effected with 'reasonable clarity and deliberateness.'") (citations omitted)). "Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover." *Spectrum Int'l, Inc. v. Sterilite Corp.*, 164

F.3d 1372, 1378–79 (Fed. Cir. 1988) (quotation omitted). "As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution." *Omega Eng'g, Inc.*, 334 F.3d at 1324.

Although "less significant than the intrinsic record in determining the legally operative meaning of claim language," the Court may rely on extrinsic evidence to "shed useful light on the relevant art." *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but "conclusory, unsupported assertions by experts as to the definition of a claim term are not useful." *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

The patent in suit may contain means-plus-function limitations that require construction. Where a claim limitation is expressed in means-plus-function language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. § 112 ¶ 6. *Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). In relevant part, § 112 mandates that "such a claim limitation be construed to cover the corresponding structure . . . described in the specification and equivalents thereof." *Id.* (citing 35 U.S.C. § 112 ¶ 6.). Accordingly, when faced with means-plus-function limitations, courts "must turn to the written description of the patent to find the structure that corresponds to the means recited in the [limitations]." *Id.*

Construing a means-plus-function limitation involves two inquiries. The first step requires "a determination of the function of the means-plus-function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Once a court has determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248 F.3d at 1311. A structure is corresponding "only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id.* Moreover, the focus of the corresponding structure inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function." *Id.*

Summary Judgment

"Summary judgment is appropriate in a patent case, as in other cases, when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law." *Nike, Inc. v. Wolverine World Wide, Inc.*, 43 F.3d 644, 646 (Fed. Cir. 1994); FED. R. CIV. P. 56(c). The moving party bears the initial burden of "informing the district court of the basis for its motion" and identifying the matter that "it believes demonstrate[s] the absence of a genuine issue of material fact." *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). If the moving party meets this burden, the nonmoving party must then set forth "specific facts showing that there is a genuine issue for trial." FED. R. CIV. P. 56(c); *see also T.W. Elec. Serv., Inc. v. Pac. Elec. Contractors Ass'n*, 809 F.2d 626, 630 (9th Cir. 1987).

A party seeking to invalidate a patent must overcome a presumption that the patent is valid. *See* 35 U.S.C. § 282; *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2243 (2011); *U.S. Gypsum Co. v. Nat'l Gypsum Co.*, 74 F.3d 1209, 1212 (Fed. Cir. 1996). This presumption

places the burden on the challenging party to prove the patent's invalidity by clear and convincing evidence. *Microsoft*, 131 S. Ct. at 2243; *U.S. Gypsum Co.*, 74 F.3d at 1212. Close questions of indefiniteness "are properly resolved in favor of the patentee." *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1348 (Fed. Cir. 2005); *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1380 (Fed. Cir. 2001).

Claims must particularly point out and distinctly claim the invention. "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112 ¶ 2. The primary purpose of the requirement of definiteness is to provide notice to those skilled in the art of what will constitute infringement. *See United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942). The definiteness standard is one of reasonableness under the circumstances, requiring that, in light of the teachings of the prior art and the invention at issue, the claims apprise those skilled in the art of the scope of the invention with a reasonable degree of precision and particularity. *See Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 624 (Fed. Cir. 1985). To rule "on a claim of patent indefiniteness, a court must determine whether one skilled in the art would understand what is claimed when the claim is read in light of the specification." *Bancorp. Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1372 (Fed. Cir. 2004). "A determination of indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims, [and] therefore, like claim construction, is a question of law." *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1378 (Fed. Cir. 1999).

ANALYSIS

I. Claim Construction

A. Agreed Terms

The Parties have agreed to the construction of several terms. P.R. 4-5(d) Chart at 2–7 (Docket No. 271-1 at 2–7).

Claim Terms	Agreed Claim Construction
cyclic extension	a truncated copy of the FFT output frame
coupled [coupling]	connected [connection] directly or indirectly
radio frequencies	the frequencies in the portion of the electromagnetic spectrum that is between the audio-frequency portion and the infrared portion
data processing means	a means to process electronic signals
means . . . for interleaving blocks of said data	This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: interleaving blocks of data Structure: the Di-Bit Interleaver described in block 43 of Figure 7
modulation means for modulating input data of said input data channel into a plurality of sub-channels comprised of a sequence of data symbols such that the period of a sub-channel symbol is longer than a predetermined period representative of the time delay of significant ones of non-direct transmission paths	This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: modulating input data of said input data channel into a plurality of sub-channels comprised of a sequence of data symbols such that the period of a sub-channel symbol is longer than predetermined period representative of the time delay of significant ones of non-direct transmission paths Structure: the Complex FFT (Fast Fourier Transform) Based Modulator in block 32 of Figure 6, executing the 16 Point Complex IFFT (Inverse Fast Fourier Transform) of block 47 of Figure 7, as referenced at column 6:23–31
ensemble demodulation means for demodulating received symbols of said plurality of sub-channels into data for said output data channel	This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: demodulating received symbols of

	said plurality of sub-channels into output data for said output data channel
	Structure: the FFT-based Complex Differential Demodulator in block 33 of Figure 6, executing the 16 Point FFT (Fast Fourier Transform) of block 63 of Figure 8
executing an Inverse Fast Fourier Transform	No construction necessary
resulting from said Inverse Fast Fourier Transform	No construction necessary
switching means	No construction necessary
frame having zero padding	No construction necessary
transmission signal processing means	Transmission signal processing means is comprised of modulation means for modulating input data of said input data channel into a plurality of sub-channels comprised of a sequence of data symbols such that the period of a sub-channel symbol is longer than a predetermined period representative of the time delay of significant ones of non-direct transmission paths, means to apply data reliability enhancement to said data passed to said modulation means and means, interposed between said data reliability enhancement means and said modulation means, for interleaving blocks of said data.
hub receivers	No construction necessary

In view of the Parties' agreements on the proper construction of each of the identified terms, the Court **ADOPTS AND APPROVES** these constructions.

B. Stipulated Terms

In accordance with the Court's prior Order, the Parties have stipulated to a previous construction of the following disputed terms to govern in this case. Docket No. 245. The claim construction record from prior '069 Patent litigation has been incorporated by reference into this case and the Parties reserve their right to appeal these constructions. *Id.*

Claim Terms	Stipulated Construction
means to apply a data reliability enhancement	This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6.

	Function: to apply a data reliability enhancement to said data passed to said modulation means

Structure: rate ½ Forward Error Correction encoder |
significant ones of non-direct transmission paths	reflected transmission paths with sufficient signal magnitude to impair the reception of transmitted symbols
for . . . operation in a confined multipath environment	a capability of operating in an indoor environment
frame	a set of data
wireless LAN	No construction necessary
confined multipath environment	an indoor environment
antenna means	a structure for radiating or receiving radio waves
blocks	a block of data having one or more bits
Forward Error Correction	a coding scheme that uses redundancy to attempt to reconstruct originally transmitted data at the receiver without asking for retransmission of the originally transmitted data
synchronizing detection means that detects a header in received data	This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6.

Function: detecting a header in received data

Structure: synchronizing calculator and detector in Figure 6 and the synchronizing calculator and detector block 65 in Figure 8 |
header	a portion of a transmission, prior to sending input data, comprising a plurality of carriers of known phase relationship
variable duration less than or equal to a time period over which a transmission characteristic is essentially stationary	No construction necessary
predetermined number of said blocks of said data within a frame	No construction necessary
frame of interleaved data	a frame in which the data has been reordered by interleaving means

In view of the Parties' stipulation to the Court's prior construction of each of the

identified terms, the Court **ADOPTS AND APPROVES** these constructions.

C. Disputed Terms

1. "reception signal processing means"

CSIRO's Proposed Construction	Defendants' Proposed Construction
means to modify received signals by performing essentially the reverse procedures of those in the corresponding elements in the transmission signal processing means	This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: processing received signals Structure: the Analog to Digital Converts in blocks 60 & 61, the 4 Point Cyclic Extraction & Frame Assembly in block 62, the 16 Point FFT in block 63, the Frame Disassembler & Zero Pad Removal of block 64, the Synchronization Calculator and Detector in block 65, the Soft Decision Differential Demodulator & Detector in block 66, the De-Interleaver in block 67, and the Soft Decision TCM Decoder in block 68, all of Figure 8

The Parties' dispute centers on whether "reception signal processing means" is a means-plus-function term governed by § 112, ¶ 6. The Parties have agreed that "transmission signal processing means" is not a means-plus-function term, and, as CSIRO contends, CSIRO's proposed construction for "reception signal processing means" has been agreed to and applied in past litigation. Docket No. 251 at 4. CSIRO argues that because of the agreed construction of "transmission signal processing means," "reception signal processing means" is likewise not a means-plus-function term, and is readily understood as simply performing the reverse procedures of those performed by the transmission signal processing means. *Id.* CSIRO further contends that § 112, ¶ 6 does not apply because the term does not recite any functional limitation. *Id.* at 5. Finally, even if this term is construed subject to § 112, ¶ 6, CSIRO asserts that Defendants' proposed structure is overly inclusive. *Id.* at 6–7. CSIRO argues that as described in the specification, only the FFT demodulator, de-interleaver, and FEC decoder are necessary components of the reception signal processing means. *Id.*

Defendants contend that because the word "means" is used with a function, there is a presumption that § 112, ¶ 6 applies. Docket No. 262 at 4–5. They further contend CSIRO has not overcome that presumption here because the clause recites no structure sufficient to perform the function of reception signal processing. *Id.* Defendants argue that "transmission signal processing means" is distinguishable from "reception signal processing means" because the claims at issue specifically include the defining structure for the transmission means, while they do not for the reception means. *Id.* at 6–7. Defendants propose including all Figure 8 components in the corresponding structure based on the '069 Patent specification, which describes using all of those components in the processing of received signals. *Id.* at 9–10.

Because the term includes the word "means," § 112, ¶ 6 presumably applies, and here CSIRO has failed to effectively rebut that presumption. The claims require the processing of reception signals; however they provide no structure to accomplish that function. '069 Patent, claims 10, 42. This is readily distinguished from the agreed term "transmission signal processing means," for which the claims effectively define the structure. *Id.* Because this is a means-plus-function term, the Court must ascertain the corresponding structure in the written description necessary to perform the function. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003). In describing Figure 8, the '069 Patent specification describes the components involved in processing received signals, and includes: the analogue to digital converters; the cyclic extractor and frame assembler; the Fast Fourier Transform device; the frame disassembler and zero pad remover; the synchronising calculator and detector; the demodulator/detector; the de-interleaver; and the TCM decoder. '069 Patent, cols. 6:54–7:6. Because the specification clearly identifies all of these components as playing a part in processing received signals, all of these components are included in the structure for this means-plus-function term.

Accordingly, the Court construes **"reception signal processing means"** as a **means-plus-function term**. The function is processing received signals. The corresponding structure is the Analog to Digital Converts in blocks 60 & 61, the 4 Point Cyclic Extraction & Frame Assembly in block 62, the 16 Point FFT in block 63, the Frame Disassembler & Zero Pad Removal of block 64, the Synchronization Calculator and Detector in block 65, the Soft Decision Differential Demodulator & Detector in block 66, the De-Interleaver in block 67, and the Soft Decision TCM Decoder in block 68, all of Figure 8.

2.   "hub transceivers"

CSIRO's Proposed Construction	Defendants' Proposed Construction
No construction necessary. If the Court determines that construction is necessary, the term means "transceivers connected by means of a backbone."	**Defendants:**[3] a non-mobile device that transmits data to and receives data from one or more mobile devices **Realtek & Realcom:** No construction necessary.

Regarding this term, the Parties' dispute is whether construction is necessary. CSIRO argues that this term has an ordinary and customary meaning and does not need to be construed. Docket No. 251 at 7. CSIRO further contends that the Defendants' proposal adds limitations not found in the claim nor supported by the specification, since there is no recited requirement for hub transceivers to be non-mobile. *Id.* at 8.

Defendants argue that "non-mobile" is necessary to distinguish "hub transceivers" from "mobile receivers" in claim 10 and to distinguish the "wireless LAN" of claim 10 from the "peer-to-peer wireless LAN" of claim 17. Docket No. 262 at 14. Defendants support this argument by citing Figure 5, which indicates hub transceivers receive power from AC wall outlets, while mobile transceivers are battery powered. *Id.* at 16. Defendants also contend that

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[3] All Defendants except Realtek Semiconductor Corp. ("Realtek") and Real Communications, Inc. ("Realcom").

CSIRO's proposed alternative construction imports a limitation that hub transceivers must be connected by a backbone, which they argue is not required by the claims. *Id.* at 14.

Neither the patent claims nor specification restricts a hub transceiver to being non-mobile. Although the patent draws a distinction between hub transceivers and mobile transceivers, requiring hub transceivers to remain stationary is not part of that distinction. *See* '069 Patent, claims 10, 42, col 5:35–59, fig. 4. Accordingly, including such a requirement in the construction of the term would add a limitation that the patent does not require. Further, CSIRO's alternate proposed construction, "transceivers connected by means of a backbone," similarly adds the limitation of a backbone connection that is not recited in the claims. Based on the '069 Patent claims and specification, a jury will understand the meaning of "hub transceiver" and the distinction between "mobile transceivers" and "hub transceivers" with no additional clarification. Accordingly, **no construction is necessary** for this term.

II.   Motion for Summary Judgment of Invalidity

A.   Claims 10–16, 26–32, 42–48, and 68–72

Each of these claims includes the term "significant ones of non-direct transmission paths." Defendants contend these claims are invalid for indefiniteness because this term is insolubly ambiguous and not amenable to construction. Docket No. 263 at 2. In support of this argument, Defendants incorporate by reference the following pleadings, along with all declarations and exhibits filed in support thereof, from prior litigation concerning the '069 Patent:

- Defendants' Motion for Summary Judgment of Invalidity, *Intel Corp. v. CSIRO*, No. 6:06-cv-551, Docket No. 216 (E.D. Tex. May 22, 2008).

- Defendants' Reply in Support of Motion for Summary Judgment of Invalidity, *Intel Corp. v. CSIRO*, No. 6:06-cv-551, Docket No. 226 (E.D. Tex. June 16, 2008).

- Defendants' Supplemental Reply in Support of Motion for Summary Judgment of Invalidity and Claim Construction, *Intel Corp. v. CSIRO*, No. 6:06-cv-551, Docket No. 232 (E.D. Tex. June 23, 2008).

Defendants recognize that the Court has previously considered and rejected their position on this term and move for summary judgment in this case for the purpose of preserving their right to appeal. Docket No. 263 at 3.

As in prior litigation, CSIRO contends the phrase "significant ones of non-direct transmission paths" is capable of construction and not indefinite. Docket No. 266 at 1–2. In support of its argument, CSIRO incorporates by reference the following pleadings, evidence, and arguments, including all declarations and exhibits, from prior litigation:

- CSIRO's Opposition to Defendants' Motion for Summary Judgment of Invalidity, *Intel Corp. v. CSIRO*, No. 6:06-cv-551, Docket No. 221 (E.D. Tex. June 6, 2008).

- [Corrected] CSIRO's Supplemental Brief on Claim Construction and in Opposition to Defendants' Motion for Summary Judgment of Invalidity, *Intel Corp. v. CSIRO*, No. 6:06-cv-551, Docket No. 233 (E.D. Tex. June 23, 2008).

- Transcript of *Markman* and Motion Hearing Proceedings on June 26, 2008, *Intel Corp., v. CSIRO*, No. 6:06-cv-551, Docket No. 243 (E.D. Tex. July 16, 2008).

- CSIRO's Response in Opposition to Motion for Summary Judgment of Invalidity, *CSIRO v. Lenovo (United States) Inc.*, No. 6:09-cv-399, Docket No. 126 (E.D. Tex. March 18, 2011).

- Official Transcript of *Markman* Hearing Proceedings held on 3/31/11 before Judge Leonard Davis, *CSIRO v. Lenovo (United States) Inc.*, No. 6:09-cv-399, Docket No. 183 (E.D. Tex. filed May 20, 2011).

CSIRO agrees with the Court's previous determination that the phrase "significant ones of non-direct transmission paths" is not indefinite and asks the Court to make a similar determination here. Docket No. 266 at 2.

Because the Parties assert no new arguments in support of or in opposition to the Motion for Summary Judgment on this term, the Court declines to reconsider the prior ruling. For the

reasons stated in the Court's previous Order, the Motion for Summary Judgment is **DENIED** as to the term "significant ones of non-direct transmission paths." *See* Memorandum Opinion and Order, *Intel Corp. v. CSIRO*, No. 6:06-cv-551, Docket No. 254 (E.D. Tex. Aug. 14, 2008).

B.   Claims 84, 94, and 96

Each of these claims includes the term "packet has a variable duration less than or equal to a time period over which a transmission characteristic is essentially stationary." Again, Defendants content this phrase is insolubly ambiguous and therefore indefinite. Docket No. 263 at 3. As with the previous term, Defendants move for summary judgment here to preserve their right to appeal. *Id.* at 4–5. They further incorporate by reference the following arguments in support of their Motion, along with any ancillary declarations and exhibits:

- Defendants' Motion for Summary Judgment of Invalidity Based on Indefiniteness for Certain Claims, *CSIRO v. Lenovo (United States) Inc.*, No. 6:09-cv-399, Docket No. 249 (E.D. Tex. Sept. 14, 2011).

- Defendants' Reply to Plaintiff's Response to Defendants' Motion for Summary Judgment of Invalidity Based on Indefiniteness for Certain Claims, *CSIRO v. Lenovo (United States) Inc.*, No. 6:09-cv-399, Docket No. 262 (E.D. Tex. Sept. 29, 2011).

CSIRO similarly incorporates the following pleadings and evidence, along with any declarations and exhibits in support of its position that the phrase is capable of construction and not indefinite:

- CSIRO's Response to Motion for Summary Judgment of Invalidity Based on Indefiniteness for Certain Claims, *CSIRO v. Lenovo (United States) Inc.*, No. 6:09-cv-399, Docket No. 259 (E.D. Tex. Sept. 26, 2011).

- Official Transcript of *Markman* Hearing and Motions Hearing Volume I, *CSIRO v. Lenovo (United States) Inc.*, No. 6:09-cv-399, Docket No. 303 (E.D. Tex. Nov. 7, 2011).

Because the Parties assert no new arguments in support of or in opposition to the Motion for Summary Judgment on this term, the Court again declines to reconsider the prior ruling. For the reasons stated in the Court's previous Order, the Motion for Summary Judgment is **DENIED** as

to the term "packet has a variable duration less than or equal to a time period over which a transmission characteristic is essentially stationary." *See* Memorandum Opinion and Order, *CSIRO v. Lenovo (United States) Inc.,* No. 6:09-cv-399, Docket No. 366 (E.D. Tex. Jan. 20, 2012).

CONCLUSION

For the foregoing reasons, the Court hereby **ADOPTS** the claims constructions as set forth above. For ease of reference, the Court's claim interpretations are set forth in a table in Appendix A. Further, the Court **RECOMMENDS DENYING** Defendants' Motion for Summary Judgment.

Within fourteen days after receipt of the Magistrate Judge's report, any party may serve and file written objections to the findings and recommendations of the Magistrate Judge.

A party's failure to file written objections to the findings, conclusions, and recommendations contained in this Report within fourteen days after service shall bar that party from *de novo* review by the District Judge of those findings, conclusions, and recommendations and, except upon grounds of plain error, from attacking on appeal the unobjected-to proposed factual findings and legal conclusions accepted and adopted by the district court. *Douglass v. United Servs. Auto. Ass'n*, 79 F.3d 1415, 1430 (5th Cir. 1996) (en banc) (superseded on other grounds, 28 U.S.C. § 636(b)(1)) (extending the time to file objections from ten to fourteen days).

So ORDERED and SIGNED this 12th day of May, 2014.

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K. NICOLE MITCHELL
UNITED STATES MAGISTRATE JUDGE

Claim Term/Phrase	Court's Construction
reception signal processing means	This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: processing received signals Structure: the Analog to Digital Converts in blocks 60 & 61, the 4 Point Cyclic Extraction & Frame Assembly in block 62, the 16 Point FFT in block 63, the Frame Disassembler & Zero Pad Removal of block 64, the Synchronization Calculator and Detector in block 65, the Soft Decision Differential Demodulator & Detector in block 66, the De-Interleaver in block 67, and the Soft Decision TCM Decoder in block 68, all of Figure 8
hub transceivers	No further construction required
cyclic extension	**[Agreed]** a truncated copy of the FFT output frame
coupled [coupling]	**[Agreed]** connected [connection] directly or indirectly
radio frequencies	**[Agreed]** the frequencies in the portion of the electromagnetic spectrum that is between the audio-frequency portion and the infrared portion
data processing means	**[Agreed]** a means to process electronic signals
means . . . for interleaving blocks of said data	**[Agreed]** This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: interleaving blocks of data Structure: the Di-Bit Interleaver described in block 43 of Figure 7
modulation means for modulating input data of said input data channel into a plurality of sub-channels comprised of a sequence of data symbols such that the period of a sub-channel symbol is longer than a predetermined period representative of the time delay of significant ones of non-direct transmission paths	**[Agreed]** This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: modulating input data of said input data channel into a plurality of sub-channels comprised of a sequence of data symbols such that the period of a sub-channel symbol is longer than predetermined period representative of the time delay of significant ones of non-direct transmission paths

	Structure: the Complex FFT (Fast Fourier Transform) Based Modulator in block 32 of Figure 6, executing the 16 Point Complex IFFT (Inverse Fast Fourier Transform) of block 47 of Figure 7, as referenced at column 6:23–31
ensemble demodulation means for demodulating received symbols of said plurality of sub-channels into data for said output data channel	**[Agreed]** This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: demodulating received symbols of said plurality of sub-channels into output data for said output data channel Structure: the FFT-based Complex Differential Demodulator in block 33 of Figure 6, executing the 16 Point FFT (Fast Fourier Transform) of block 63 of Figure 8
executing an Inverse Fast Fourier Transform	**[Agreed]** No construction necessary
resulting from said Inverse Fast Fourier Transform	**[Agreed]** No construction necessary
switching means	**[Agreed]** No construction necessary
frame having zero padding	**[Agreed]** No construction necessary
transmission signal processing means	**[Agreed]** Transmission signal processing means is comprised of modulation means for modulating input data of said input data channel into a plurality of sub-channels comprised of a sequence of data symbols such that the period of a sub-channel symbol is longer than a predetermined period representative of the time delay of significant ones of non-direct transmission paths, means to apply data reliability enhancement to said data passed to said modulation means and means, interposed between said data reliability enhancement means and said modulation means, for interleaving blocks of said data.
hub receivers	**[Agreed]** No construction necessary
means to apply a data reliability enhancement	**[Stipulated]** This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: to apply a data reliability enhancement to said data passed to said modulation meand Structure: rate ½ Forward Error Correction

	encoder
significant ones of non-direct transmission paths	**[Stipulated]** reflected transmission paths with sufficient signal magnitude to impair the reception of transmitted symbols
for . . . operation in a confined multipath environment	**[Stipulated]** a capability of operating in an indoor environment
frame	**[Stipulated]** a set of data
wireless LAN	**[Stipulated]** No construction necessary
confined multipath environment	**[Stipulated]** an indoor environment
antenna means	**[Stipulated]** a structure for radiating or receiving radio waves
blocks	**[Stipulated]** a block of data having one or more bits
Forward Error Correction	**[Stipulated]** a coding scheme that uses redundancy to attempt to reconstruct originally transmitted data at the receiver without asking for retransmission of the originally transmitted data
synchronizing detection means that detects a header in received data	**[Stipulated]** This is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Function: detecting a header in received data Structure: synchronizing calculator and detector in Figure 6 and the synchronizing calculator and detector block 65 in Figure 8
header	**[Stipulated]** a portion of a transmission, prior to sending input data, comprising a plurality of carriers of known phase relationship
variable duration less than or equal to a time period over which a transmission characteristic is essentially stationary	**[Stipulated]** No construction necessary
predetermined number of said blocks of said data within a frame	**[Stipulated]** No construction necessary
frame of interleaved data	**[Stipulated]** a frame in which the data has been reordered by interleaving means